WHAT IS CLAIMED IS:

1. A method for providing different classes of treatment in packet communications, comprising:

detecting a payload of data to be transmitted from an application;

dividing the payload of data into a first group of bits associated with a first treatment class and a second group of bits associated with a second treatment class;

creating a first packet including the first group of bits and a first header that identifies the first packet with the first treatment class;

creating a second packet including the second group of bits and a second header that identifies the second packet with the second treatment class;

mapping the first packet to a first communications bearer configured to support the first treatment class using the first header; and

mapping the second packet to a second communications bearer configured to support the second treatment class using the second header.

2. The method in claim 1, wherein the dividing step occurs at an application processing layer.

3. The method in claim 2, wherein the application processing layer provides the first and second packets to an Internet Protocol (IP) processing layer via an applications programming interface (API).

4. The method in claim 1, wherein the payload is passed from the application to an Internet Protocol (IP) processing layer and the dividing step occurs at the IP processing layer.

5. The method in claim 1, wherein the first and second headers include information that will permit a receiver to reassemble the payload with the first and second packets in a correct sequence.

6. The method in claim 1, wherein the first and second headers are Internet Protocol (IP) headers and each treatment class includes a corresponding flow label, and

wherein the mapping of a packet to a corresponding communications bearer is determined using a standard IP header field.

7. The method in claim 6, wherein the first and second IP packets are IP version 6 (IPv6) packets and the mapping of each packet to a corresponding communications bearer is determined using the flow label of the IPv6 header.

8. The method in claim 1, wherein the first and second headers are Internet Protocol (IP) headers that each include a destination option field, and wherein the mapping of each packet to a corresponding communications bearer is determined using the destination option of the packet.

9. The method in claim 1, wherein the first and second packets are real time transport protocol (RTP) packets and the first and second headers are RTP headers including a RTP extension indicating one of the treatment classes, and wherein the mapping of an RTP packet to a corresponding communications bearer is determined using the RTP extension of the RTP packet.

10. The method in claim 1, further comprising:

compressing the first and second headers.

11. The method in claim 1, wherein the first and second treatments correspond to first and second quality of services.

12. The method in claim 1, wherein the first and second treatments correspond to first and second error protection schemes.

13. For use in a radio communications system, a method for providing different levels of error protection (EP) in packet communications, comprising:

detecting a data frame to be transmitted from an application;

dividing the data frame into a first flow of bits associated with a first EP class and a second flow of bits associated with a second EP class;

creating a first packet for carrying first flow bits and a first header that identifies the first packet with the first EP class;

creating a second packet for carrying second flow bits and a second header that identifies the second packet with the second EP class;

mapping the first packet to a first radio bearer configured with a quality of service that supports the first EP class using the first header; and

mapping the second packet to a second radio bearer configured with a quality of service that supports the second EP class using the second header.

14. The method in claim 13, wherein the data frame is generated by a speech coder-decoder (CODEC) and includes bits for three EP classes, the method further comprising:

creating a third packet for carrying a third flow of bits and a third header that identifies the third packet with a third EP class;

mapping the third packet to a third radio bearer configured with a quality of service that supports the third EP class using the third header.

15. The method in claim 14, wherein the dividing step occurs at an application layer.

16. The method in claim 14, wherein the data frame is passed from the application to an Internet Protocol (IP) layer and the dividing step occurs at the IP layer.

17. The method in claim 13, wherein the first and second headers are Internet Protocol headers and each quality of service class has a corresponding flow label, and

wherein the mapping of a packet to a corresponding radio bearer is determined using a standard IP header field.

18. The method in claim 17, wherein the first and second IP packets are IP version 6 (IPv6) packets and the mapping of each packet to a corresponding radio bearer is determined using the flow label of the IPv6 header.

19. The method in claim 13, wherein the mapping of each packet to a corresponding radio bearer is determined using a combination of source and destination addresses, a transport layer protocol, and a port number in the packet's header.

20. The method in claim 13, wherein the first and second packets are real time transport protocol (RTP) packets and the first and second headers are RTP headers including a RTP extension indicating one of the quality of service classes, and

wherein the mapping of an RTP packet to a corresponding radio bearer is determined using the RTP extension of the RTP packet.

21. The method in claim 13, wherein the first and second headers are Internet Protocol (IP) headers that each include a destination option field, and wherein the mapping of each packet to a corresponding radio bearer is determined using the destination option of the packet.

22. The method in claim 13, further comprising:

compressing the first and second headers.

23. The method in claim 22, further comprising:

receiving the first and second packets;

decompressing the first and second headers;

determining from the first and second headers the first and second flows;

using first and second EP schemes to detect and/or correct errors in the first and second flows; and

combining the first and second flows into the data frame.

24. Apparatus for transporting data with different classes of treatment, comprising:

a buffer for buffering a payload of data to be transmitted from an application;

a divider for dividing the payload of data into a first group of bits associated with a first treatment class and a second group of bits associated with a second treatment class;

a packetizer for creating a first packet including the first group of bits and a first header that identifies the first packet with the first treatment class and creating a second packet including the second group of bits and a second header that identifies the second packet with the second treatment class;

a mapper for mapping the first packet to a first communications bearer configured to support the first treatment class using the first header and mapping the second packet to a second communications bearer configured to support the second treatment class using the second header; and

a transmitter for transmitting the first and second packets over the first and second communications bearers, respectively.

25. The apparatus in claim 24, wherein the divider is included in an application layer program.

26. The apparatus in claim 25, wherein the application layer program provides the first and second packets to an Internet Protocol (IP) layer via an applications programming interface.

27. The apparatus in claim 24, wherein the divider is included in an Internet Protocol (IP) layer program.

28. The apparatus in claim 24, wherein the first and second headers include information that will permit a receiver to reassemble the payload with the first and second packets in a correct sequence.

29. The apparatus in claim 24, wherein the first and second headers are Internet Protocol (IP) headers and each treatment class has a corresponding flow label, and wherein the mapping of each packet to a corresponding communications bearer is determined using a standard IP header field.

30. The apparatus in claim 29, wherein each IP packet is an IP version 6 (IPv6) packet and the mapping of each packet to a corresponding communications bearer is determined using the flow label of the IPv6 header.

31. The apparatus in claim 24, wherein the first and second packets are real time transport protocol (RTP) packets and the first and second headers are RTP headers including a RTP extension indicating one of the treatment classes, and wherein the

mapping of an RTP packet to a corresponding communications bearer is determined using the RTP extension of the RTP packet.

32. The apparatus in claim 24, wherein the first and second headers are Internet Protocol (IP) headers that each include a destination option field, and wherein the mapping of each packet to a corresponding communications bearer is determined using the destination option of the packet.

33. The apparatus in claim 24, further comprising:

a data compresser for compressing the first and second headers.

34. The apparatus in claim 24, wherein the first and second treatments correspond to first and second quality of services.

35. The apparatus in claim 24, wherein the first and second treatments correspond to first and second error protection schemes.

36. For use in a radio communications system, apparatus for providing different levels of error protection (EP) in packet communications, comprising:

means for detecting a data frame to be transmitted from an application;

means for dividing the data frame into a first flow of bits associated with a first EP class and a second flow of bits associated with a second EP class;

means for creating a first packet for carrying first flow bits and a first header that identifies the first packet with the first EP class;

means for creating a second packet for carrying second flow bits and a second header that identifies the second packet with the second EP class;

means for mapping the first packet to a first radio bearer configured with a quality of service that supports the first EP class using the first header; and

means for mapping the second packet to a second radio bearer configured with a quality of service that supports the second EP class using the second header.

37. The apparatus in claim 36, wherein the data frame is generated by a speech coder-decoder (CODEC) and includes bits for three EP classes, the apparatus further comprising:

means for creating a third packet for carrying a third flow of bits and a third header that identifies the third packet with a third EP class;

means for mapping the third packet to a third radio bearer configured with a quality of service that supports the third EP class using the third header.

38. The apparatus in claim 37, wherein the dividing step occurs at an application layer.

39. The apparatus in claim 37, wherein the data frame is passed from the application to an Internet Protocol (IP) layer and the dividing step occurs at the IP layer.

40. The apparatus in claim 36, wherein the first and second headers are Internet Protocol (IP) headers and each quality of service class has a corresponding flow label, and

wherein the mapping of each packet to a corresponding radio bearer is determined using a standard IP header field.

41. The apparatus in claim 36, wherein each IP packet is an IP version 6 (IPv6) packet and the mapping of each packet to a corresponding radio bearer is determined using the flow label of the IPv6 header.

42. The apparatus in claim 36, wherein the first and second packets are real time transport protocol (RTP) packets and the first and second headers are RTP headers including a RTP extension indicating one of the quality of service classes, and

wherein the mapping of an RTP packet to a corresponding radio bearer is determined using the RTP extension of the RTP packet.

43. The apparatus in claim 36, wherein the first and second headers are Internet Protocol (IP) headers that each include a destination option field, and wherein the mapping of each packet to a corresponding radio bearer is determined using the destination option of the packet.

44. The apparatus in claim 36, further comprising:
means for compressing the first and second headers.